

Claims:

1. Process for the production of hydrogen cyanide by the so-called BMA process, wherein an aliphatic hydrocarbon with 1 to 4 C atoms is reacted with ammonia in the presence of a platinum-containing catalyst at 1000 to 1350°C and hydrogen cyanide is separated out of the reaction gas formed, characterised in that the platinum of the catalyst is doped with at least one element from the series copper, silver, gold, palladium and tungsten, the quantity of Cu and Pd being up to 30 mole %, based on Pt.
2. Process according to claim 1, characterised in that platinum is doped with 0.01 to 50 mole %, particularly 0.1 - 30 mole % of an element from the series silver, gold and tungsten.
3. Process according to claim 1 or 2, characterised in that the catalyst additionally contains aluminium or magnesium in elemental or nitride form, particularly aluminium nitride.
4. Process according to any one of claims 1 to 3, characterised in that the catalyst is arranged as a coating on a support material consisting of an oxide or nitride ceramic material, particularly aluminium oxide.
5. Process according to any one of claims 1 to 4, characterised in that the catalyst contains as its main components platinum, gold and/or silver and aluminium nitride and/or a platinum-aluminium alloy and is arranged as a coating on shaped articles, particularly as an internal coating of

reaction tubes consisting substantially of aluminium oxide, by means of an oxide or silicate adhesive.

6. Process according to any one of claims 1 to 4, characterised in that
5 the reaction is performed in the presence of a catalyst coating arranged on a shaped article consisting substantially of aluminium oxide, wherein the catalyst coating is obtainable by applying a suspension, containing particulate elemental platinum, particulate
10 aluminium or aluminium nitride, particulate doping agent from the series copper, silver, gold, tungsten and palladium or a compound of these elements and a precursor of an oxide or silicate adhesive in a carrier liquid, wherein the atomic ratio of Pt to Al is 0.01 to
15 10 and the molar ratio of Pt to doping element(s) is at least 1 : 0.001 and preferably 1 : 0.01 to 1 : 1, on to the shaped article, evaporating the carrier liquid and transferring the shaped article coated in this way into the catalytically active state by heating it in the
20 presence of ammonia or nitrogen to 1000 to 1350°C.
7. Catalyst suitable for implementing the BMA process for the production of hydrogen cyanide, containing platinum and at least one doping element from the series copper, silver, gold, tungsten and palladium, wherein the
25 content of Pd and Cu is up to 20 mole % based on Pt, and aluminium nitride and/or a platinum-aluminium alloy.
8. Catalyst according to claim 7, characterised in that
30 the catalyst is in the form of a coating adhering firmly, by means of an oxide or silicate adhesive, on a shaped article consisting of an oxide, carbonide or nitride ceramic material, particularly of aluminium oxide.